



Features

LTE NB-IoT	3GPP Release 13 LTE Cat NB1 fully compliant 3GPP Release 14 LTE Cat NB1 support of: Mobility enhancement, E-Cell ID, larger TB size, two HARQ processes, multi-carrier enhance- ment, single-tone and multi-tone uplink Data rate: up to 125 kbit/s DL, 140 kbit/s UL
FDD bands	Configurable multi-band: SARA-N300: bands 3, 5, 8 SARA-N310: bands 3, 5, 8, 20, 28, (1, 2, 4, 12, 13, 18, 19, 26, 66, 71, 85) ¹
Data transfer	Non-IP based Small Data over NAS (SDoNAS) IP based SDoNAS MT/MO SMS PDU / Text mode
Network	Rel 13 e-DRX Rel 12 LTE Power Save Mode (PSM)

Software features

Protocols	Dual stack IPv4 and IPv6 Embedded TCP/IP, UDP/IP, FTP, HTTP, PPP, DNS Embedded MQTT, MQTT-SN, CoAP/DTLS Embedded HTTPS, FTPS, TLS, SSL SARA-N310: Radio policy manager SARA-N310: SIM provisioning / eUICC (BIP)
Device Management	SARA-N310: LWM2M with dynamically loaded objects
Functionalities	Last gasp Antenna detection SIM detection Bluetooth 4.2 (BR/EDR and BLE) ¹ Configurable voltage domain 1.8 V and 3.0 V
IoT platforms	SARA-N300: CTCC Tianyi SARA-N300: CMCC OneNET
Security	Jamming detection
Firmware upgrade	Via UART SARA-N300: FOTA according to CTCC/CMCC SARA-N310: uFOTA client/server solution via LWM2M

Interfaces

Serial	4-wire UART (with flow control) and ring indication for data 2-wire UART for debug
GPIO	Up to 5 GPIOs, configurable
ADC	Up to 2 10-bit ADC
USIM	Supports 1.8 V and 3.0 V SARA-N310: SIM toolkit and Bearer Independent Protocol (BIP)

¹ = Available in future FW version

Package

96 pin LGA: 16.0 x 26.0 x 2.4 mm, < 3 g

Environmental data, quality & reliability

Operating temperature	-40 °C to +85 °C
RoHS compliant (lead-free)	
Qualification according to ISO 16750	
Manufactured in ISO/TS 16949 certified production sites	

Electrical data

Power supply	3.6 V nominal, range 2.6 V to 4.2 V
Power consumption	Deep-sleep mode: < 3 µA Active mode: TBD Rx mode: TBD Tx mode: TBD

Certifications and approvals²

SARA-N300	CCC, SRRC, CMCC, CTCC, CUCC
SARA-N310	RED, RCM, ATEX/IECEx, GCF, NCC, IMDA, NBTC, Vodafone, Deutsche Telekom

² = Planned certifications

Support products

EVK-N300	Evaluation kit for SARA-N300
EVK-N310	Evaluation kit for SARA-N310

Product variants

SARA-N300	u-blox NB-IoT multi-band module for China
SARA-N310	u-blox NB-IoT multi-band global module

Further information

For contact information, see www.u-blox.com/contact-us.

For more product details and ordering information, see the [product data sheet](#).

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